

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	3189	(person\$3 same web\$3 same search\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 17:13
S2	2368	S1 and @ad<"20040105"	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 17:13
S3	235	S2 and (matri\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 18:26
S4	74	S3 and (rank\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 17:15
S5	5	S4 and (matri\$3 same approximat\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 18:31
S6	907	(rank\$4 with (web near (sit\$2 or pag\$3)))	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 18:36
S7	609	S6 and @ad<="20040105"	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 19:16
S8	23	S7 and (matri\$3 same rank\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 18:43
S9	14	S8 and (personal\$8)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 18:48

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S10	16	S8 and (personal\$8 or custom\$7)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 18:53
S11	5	S8 and ((personal\$8 or custom\$7)same search\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 19:14
S12	1860	((((personal\$8 or custom\$7) same pageRank\$3 or rank\$3) same search\$3) and matri\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 19:16
S13	1347	S12 and @ad<="20040105"	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 19:18
S14	1309	S13 and (database or stor\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 19:19
S15	38	S14 and (rank\$3 with matri\$4) and (web near pag\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 19:23
S16	44	S14 and (rank\$3 with matri\$4) and (web near (pag\$3 or sit\$2))	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/13 19:25
S17	3189	(person\$3 same web\$3 same search\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23
S18	2368	S17 and @ad<"20040105"	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23
S19	235	S18 and (matri\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23

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S20	74	S19 and (rank\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23
S21	5	S20 and (matri\$3 same approximat\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23
S22	907	(rank\$4 with (web near (sit\$2 or pag\$3)))	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23
S23	609	S22 and @ad<="20040105"	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23
S24	23	S23 and (matri\$3 same rank\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23
S25	14	S24 and (personal\$8)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23
S26	16	S24 and (personal\$8 or custom\$7)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23
S27	5	S24 and ((personal\$8 or custom\$7) same search\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23
S28	1860	((((personal\$8 or custom\$7) same pageRank\$3 or rank\$3) same search\$3) and matri\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23
S29	1347	S28 and @ad<="20040105"	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23

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S30	1309	S29 and (database or stor\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23
S31	38	S30 and (rank\$3 with matri\$4) and (web near pag\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23
S32	44	S30 and (rank\$3 with matri\$4) and (web near (pag\$3 or sit\$2))	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 10:23
S33	3189	(person\$3 same web\$3 same search\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S34	2368	S33 and @ad<"20040105"	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S35	235	S34 and (matri\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S36	74	S35 and (rank\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S37	5	S36 and (matri\$3 same approximat\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S38	907	(rank\$4 with (web near (sit\$2 or pag\$3)))	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S39	609	S38 and @ad<="20040105"	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02

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S40	23	S39 and (matri\$3 same rank\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S41	14	S40 and (personal\$8)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S42	16	S40 and (personal\$8 or custom\$7)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S43	5	S40 and ((personal\$8 or custom\$7) same search\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S44	1860	((((personal\$8 or custom\$7) same pageRank\$3 or rank\$3) same search\$3) and matri\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S45	1347	S44 and @ad<="20040105"	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S46	1309	S45 and (database or stor\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:06
S47	38	S46 and (rank\$3 with matri\$4) and (web near pag\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S48	44	S46 and (rank\$3 with matri\$4) and (web near (pag\$3 or sit\$2))	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S49	3189	(person\$3 same web\$3 same search\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02

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S50	2368	S49 and @ad<"20040105"	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S51	235	S50 and (matri\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S52	907	(rank\$4 with (web near (sit\$2 or pag\$3)))	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S53	609	S52 and @ad<="20040105"	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S54	1860	((personal\$8 or custom\$7) same pageRank\$3 or rank\$3) same search\$3) and matri\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S55	1347	S54 and @ad<="20040105"	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S56	1309	S55 and (database or stor\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S57	74	S51 and (rank\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S58	5	S57 and (matri\$3 same approximat\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S59	23	S53 and (matri\$3 same rank\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02

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S60	14	S59 and (personal\$8)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S61	16	S59 and (personal\$8 or custom\$7)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:09
S62	5	S59 and ((personal\$8 or custom\$7)same search\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S63	38	S56 and (rank\$3 with matri\$4) and (web near pag\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S64	44	S56 and (rank\$3 with matri\$4) and (web near (pag\$3 or sit\$2))	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:02
S65	25	S46 and (((pag\$3 with rank\$3) or pagerank\$3) same matr\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:08
S66	8	S65 and ((person\$8 or custom\$7) same (rank\$3 or pagerank\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/07/14 16:10

Exploiting the block structure of the web for computing pagerank - group of 13 »

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SD Kamvar, TH Haveliwala, CD Manning, GH Golub - Proc. of the 13th WWW, 2003 - www-db.stanford.edu

... of the web [3] would be useful in computing **Page- Rank**. ... [11] suggest using successive intermediate ... successively better estimates of the true **PageRank** values. ...

Cited by 75 - [View as HTML](#) - [Web Search](#)

[PS] Updating PageRank using the group inverse and stochastic complementation

AN Langville, CD Meyer - ncsu.edu

... the Markov chain [4]. A small Markov **matrix** ... The elements p_{ij} are found by using the rules ... or, if necessary, approximate) the correct, updated **PageRank** ...

Cited by 8 - [View as HTML](#) - [Web Search](#)

Extrapolation methods for accelerating PageRank computations - group of 22 »

SD Kamvar, TH Haveliwala, CD Manning, GH Golub - Proceedings of the twelfth international conference on World ..., 2003 - portal.acm.org

... to personalized and topic-sensitive **Page- Rank** schemes [11 ... been possible, as the convergence of **PageRank** slows down ... x. Doing simple algebra using equations 6 ...

Cited by 98 - [Web Search](#)

Efficient PageRank approximation via graph aggregation - group of 7 »

AZ Broder, R Lempel, F Maghoul, J Pedersen - Information Retrieval, 2006 - Springer

... $h(p)$. 2. Perform a regular **PageRank** step from ... terminology of the previous section, the **matrix** S that ... graph, which is stored and accessed using AltaVista's ...

Cited by 15 - [Web Search](#)

An analytical comparison of approaches to personalizing PageRank - group of 7 »

TH Haveliwala, S Kamvar, G Jeh - Preprint, June, 2003 - www-nlp.stanford.edu

... Haveliwala [2] computes an $n \times k$ **approximation** to Q ... The Modular **PageRank** approach proposed by Jeh and Widom [3] computes an $n \times k$ **matrix** using the k ...

Cited by 22 - [View as HTML](#) - [Web Search](#)

The intelligent surfer: Probabilistic combination of link and content information in pagerank - group of 15 »

M Richardson, P Domingos - Advances in Neural Information Processing Systems, 2002 - cs.northwestern.edu

... of the query term and the document, and QD-**PageRank** reduces to **Page- Rank**. ... by latent semantic indexing, or any heuristic measure using text size ...

Cited by 84 - [View as HTML](#) - [Web Search](#) - [BL Direct](#)

Efficient computation of pagerank - group of 18 »

TH Haveliwala - Stanford University, http://dbpubs.stanford.edu, 1999 - net.cs.pku.edu.cn

... will be essential in computing **Page- Rank**, even on ... When computing **PageRank**, we can use either single ... Using double-precision for Source and Dest, however, would ...

Cited by 136 - [View as HTML](#) - [Web Search](#)

Deeper inside PageRank - group of 15 »

AN Langville, CD Meyer - Internet Mathematics, 2004 - projecteuclid.org

... Langville and Meyer: Deeper Inside **PageRank** 339 ... One problem with solely using the web's hyperlink structure to build the Markov **matrix** is apparent. ...

Cited by 63 - [Web Search](#)

Updating pagerank with iterative aggregation - group of 9 »

AN Langville, CD Meyer - Proceedings of the 13th international World Wide Web ..., 2004 - portal.acm.org

... of the web, our algorithm updates **PageRank** using just 25 ... schemes—the primary example is the **PageRank** mechanism that ... is approximated by the $(g+1) \times (g+1)$ **matrix** ...

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1 Fast computation of low rank matrix approximations



Dimitris Achlioptas, Frank McSherry

July 2001 **Proceedings of the thirty-third annual ACM symposium on Theory of computing**

Publisher: ACM Press

Full text available:  pdf(223.29 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Given a matrix A it is often desirable to find an approximation to A that has low rank. We introduce a simple technique for accelerating the computation of such approximations when A has strong spectral structure, i.e., when the singular values of interest are significantly greater than those of a random matrix with size and entries similar to A . Our technique amounts to independently sampling and/or quantizing the entries ...


2 Fast monte-carlo algorithms for finding low-rank approximations



Alan Frieze, Ravi Kannan, Santosh Vempala

November 2004 **Journal of the ACM (JACM)**, Volume 51 Issue 6

Publisher: ACM Press

Full text available:  pdf(134.13 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

We consider the problem of approximating a given $m \times n$ matrix A by another matrix of specified rank k , which is smaller than m and n . The Singular Value Decomposition (SVD) can be used to find the "best" such approximation. However, it takes time polynomial in m, n which is prohibitive for some modern applications. In this article, we develop an algorithm that is qualitatively faster, provided we may sample the entries of the matrix in accor ...

Keywords: Matrix algorithms, low-rank approximation, sampling

3 Generalized low rank approximations of matrices



Jieping Ye

July 2004 **Proceedings of the twenty-first international conference on Machine learning ICML '04**

Publisher: ACM Press

Full text available:  pdf(194.76 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

We consider the problem of computing low rank approximations of matrices. The novelty of our approach is that the low rank approximations are on a sequence of matrices. Unlike the problem of low rank approximations of a single matrix, which was well studied in the past, the proposed algorithm in this paper does not admit a closed form solution in general. We did extensive experiments on face image data to evaluate the effectiveness of the proposed algorithm and compare the computed low rank appr ...